

Work Order ID 83217

April-13-12 1:41:50 PM

83217

~~U/R~~

Page 1

Item ID: D4154-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Plate

Stop ***NS2***

Start Date: 13/04/2012 Start Qty: ~~2400~~ ***16***

Cust Item ID:

Required Date: 27/04/2012 Req'd Qty: ~~2400~~ ***16***

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 12/04/13

Tooling:

Date:

Run Start ***NR1***

QC: Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D4154	BUR C <u>AS</u>
-------	----------------------------

100		0.00
-----	--	------

100

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg

Dwg Rev: C

Prog Rev: C

2-Deburr if necessary

B12-4-23

110	QC2- Inspect parts off machine FAI/FAIB	0.00
-----	---	------

110

QC

Memo

0.00

Quality Control

B12-4-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 83217

April-13-12 1:41:50 PM

83217

Page 2

Item ID: D4154-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Plate

Stop ***NS2***

Start Date: 13/04/2012 Start Qty: 16.00

16

Cust Item ID:

Required Date: 27/04/2012 Req'd Qty: 16.00

16

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Schulz

cut
see

Quality Control

130

Form as per dwg

0.00

130

Brake NC

Memo

0.00

24

S
12/04/12

Brake NC

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.00

Schulz

cut
24
counted

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 83217

April-13-12 1:41:50 PM

83217

Page 3

Item ID: D4154-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Plate

Stop ***NS2***

Start Date: 13/04/2012 Start Qty: 16.00

16

Cust Item ID:

Required Date: 27/04/2012 Req'd Qty: 16.00

16

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

Identify as per dwg & Stock Location: *W/A*

0.00

150

Packaging

Memo

0.00

Packaging

(24)

Q 12-4-25

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.00

Quality Control

12/4/26

MF 12-04-26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-13-12 1:41:55 PM

Page 1

Work Order ID: 83217

83217

Parent Item: D4154-1

D4154-1

Parent Item Name: Plate

Start Date: 13/04/2012

Required Date: 27/04/2012

Start Qty: 16.00

Required Qty: 16.00

Comments: IPP Rev:A 10.08.03 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S18GA		Purchased	No			100	sf	82.4860	4.2697	71.91074			

M304S18GA

**

B12-4-23

304/316 .050 Sheet

Location

Loc Qty

Loc Code

MAT020

71.486

119383

8.486

120604

63

MAT20

11

121192

11

119188

✓ 119188

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 83217
Description: Plate		Part Number: D4154-1
Inspection Dwg: D4154	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.400	+/-0.010	0.404	✓		V IRD	
0.450	+/-0.010	0.457	✓		V	
0.125	+/-0.010	0.127	2		V	
0.88	+/-0.030	0.88	2		V	
1.19	+/-0.030	1.19	2		V	
5.273	+/-0.010	5.264	x		V	
2.75	+/-0.030	2.75	2		V	
15.80	+/-0.030	15.80	2		T B&I	
3.95	+/-0.030	3.936	2		V	
4.00	+/-0.030	3.996	2		V	
6.42	+/-0.030	6.425	2		V	
21.75	+/-0.030	21.75	2		T	
4.35	+/-0.030	4.344	2		V	
1.80	+/-0.030	1.802	2		V	
21.31	+/-0.030	21.31	2		T	
4.26	+/-0.030	4.254	2		V	
8.83	+/-0.030	8.825	2		T	
5.16	+/-0.030	5.16	2		T	
0.55	+/-0.030	0.554	2		V	
91.56	+/-0.030	91.56	2		T	
90.41	+/-0.030	90.41	2		T	
74.45	+/-0.030	74.45	2		T	
66.51	+/-0.030	66.51	2		T	
48.59	+/-0.030	48.59	2		T	
40.76	+/-0.030	40.76	2		T	
15.45	+/-0.030	15.45	2		T	
5.223	+/-0.010	5.222	2		V	
Ø0.516	+0.008/-0.001	0.518	2		V	
Ø0.188	+0.005/-0.001	0.191	2		V	
0.050	+/-0.010	0.059	2		V	

Measured by: RB	Audited by: S	Preliminary Approval:
Date: 12-4-03	Date: 12/14/04	Date:

Rev	Date	Change	Revised by	Approved
A	10.09.23	New Issue	KJ	
b	11.04.28	Dimensions updated per Dwg Rev B	KJ	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	X	D4154-041	WEARPLATE ASSEMBLY
2	1	D4154-1	PLATE
3	1	D4155-1	BAR
4	A/R	2059B	HARDCOAT, (SEE NOTE 9, SHT 2)
5	A/R	4714	(SEE NOTE 11, SHT 2)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 83217 MLO
12/04/13

RELEASED
2012-04-11

D4154-041 WEARPLATE ASSEMBLY

C	REVISE NOTE 9 (ZN A8-2); ADD HARDCOAT (ZN B7-2); ADD DETAIL A (ZN C2-2)	RF	12.02.21
B	ITEM 4 WAS PR1422 (D3-1); REMOVED FINISH TO NOTE 2 (A8-2); REMOVED SECTION A-A (NO LONGER REQUIRED); REVISED D4154-1F	MB	11.04.05
A	NEW ISSUE	SC	10.07.22
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	D4154	SHEET 1 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSEMBLY	NTS
DATE	12.02.21	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

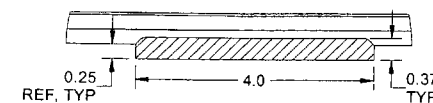
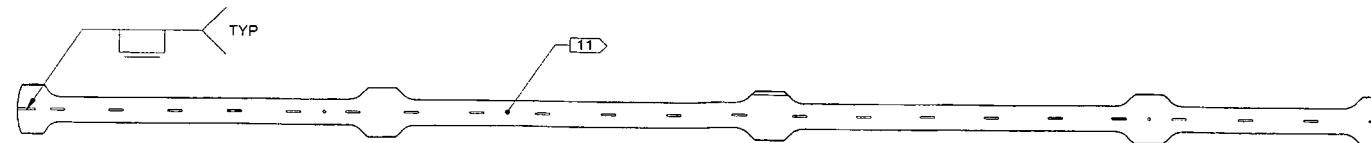
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

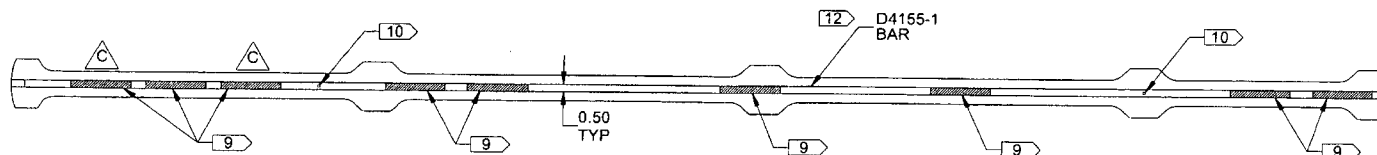
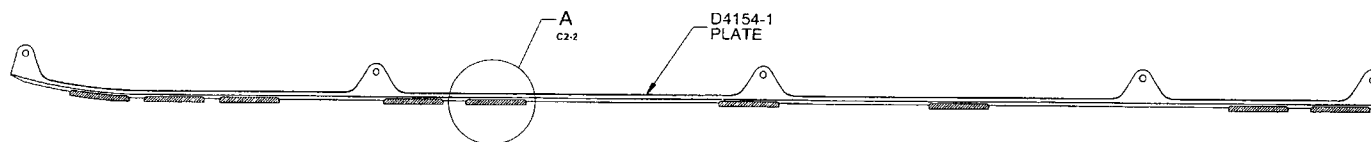
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

83217



DETAIL A
TYP C5-2



D4154-041 WEARPLATE ASSEMBLY

RELEASED
2012-04-11
JM

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 6.88 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.37 THICK x 0.50 WIDE, FLUSH WITH D4155-1 BAR ON LATERAL SURFACES, 9 PL
- 10) TRANSFER DRILL $\varnothing 0.188$ HOLES FROM D4154-1 PLATE TO D4155-1 BAR
- 11) COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF PLUS ONE ROCKGUARD 4714, 0.020-0.040 THICK
- 12) FORM TO MATCH PROFILE OF D4154-1 AT TIME OF WELDING

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D4154	SHEET 2 OF 3
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSEMBLY	NTS
DATE	12.02.21	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

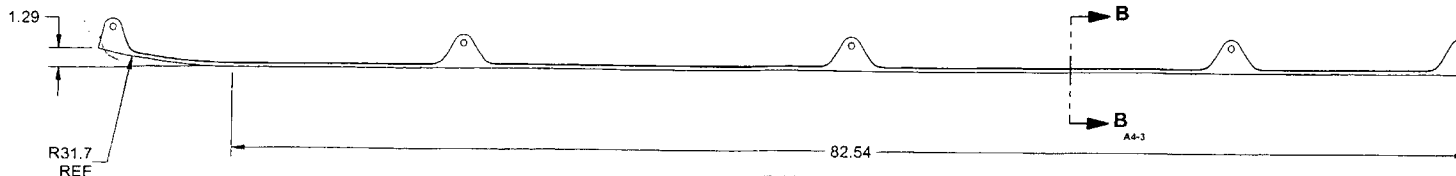
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

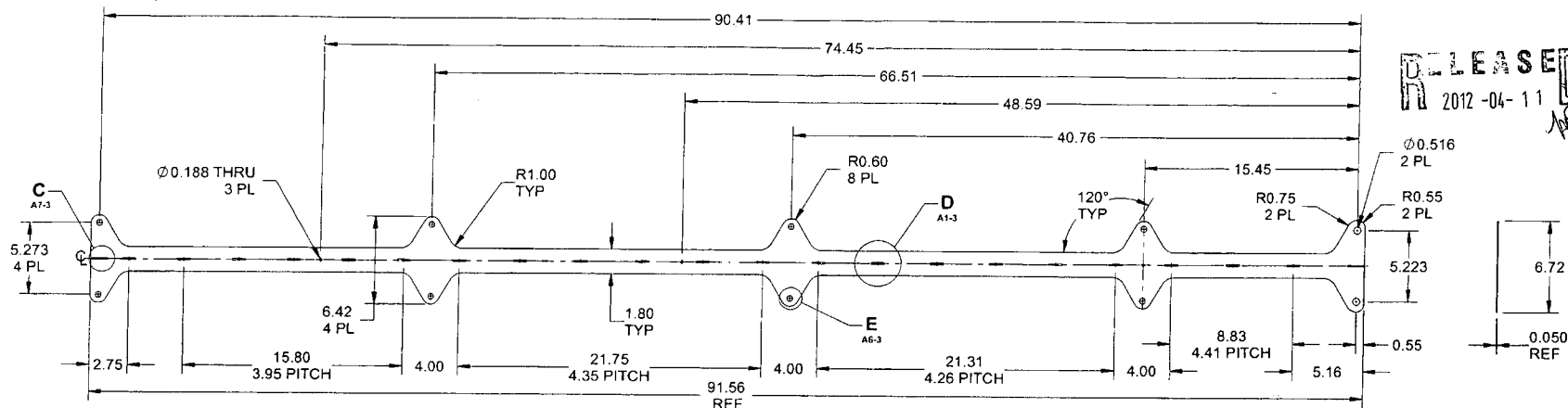
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

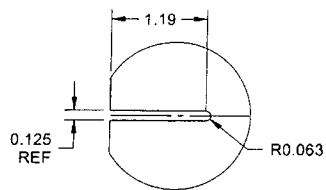
NOTE: Date & initial all entries



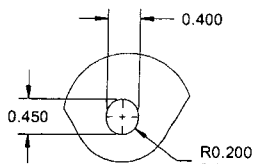
D4154-1 PLATE
(MAKE FROM D4154-1F)



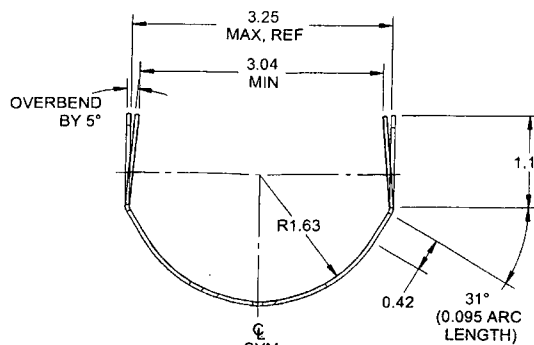
D4154-1F FLAT PATTERN



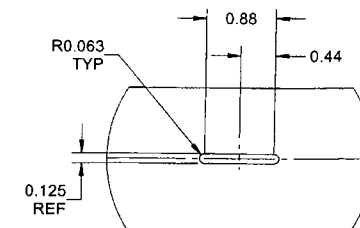
DETAIL C
END SLOT DETAIL, 2 PL



DETAIL E
SLOT DETAIL TYP



SECTION B-B



DETAIL D
SLOT DETAIL TYP

- NOTES:**
- 1) MATERIAL : AISI 304/316 STAINLESS STEEL PER AMS 5513 OR 5524 OR ASTM A240 OR ASME SA240 18 GAUGE 0.050 THICK, (REF. DART SPEC. M304S18GA)
 - 2) FINISH : NONE
 - 3) TOLERANCES : PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS : INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES : 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION : NONE
 - 7) WEIGHT : 2.95 lbs

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D4154	SHEET 3 OF 3
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	WEARPLATE ASSEMBLY	NTS
DATE	12.02.21	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries